

FORM PTO-1390 (REV. 11-2000)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER 05222.00171	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371				U.S. APPLICATION NO. (If known, see 37 CFR 1.5)	
				UNASSIGNED 09/868695	
INTERNATIONAL APPLICATION NO. PCT/US99/02737		INTERNATIONAL FILING DATE 8 February 1999		PRIORITY DATE CLAIMED 22 December 1998	
TITLE OF INVENTION A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A GOAL BASED SYSTEM UTILIZING A TABLE BASED ARCHITECTURE					
APPLICANT(S) FOR DO/EO/US ROSENFELD, et al.					
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:					
<p>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.</p> <p>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.</p> <p>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</p> <p>4. <input checked="" type="checkbox"/> The US has been elected by the expiration of 19 months from the priority date (Article 31).</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))</p> <p>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</p> <p>b. <input checked="" type="checkbox"/> has been communicated by the International Bureau.</p> <p>c. <input checked="" type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</p> <p>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).</p> <p>a. <input type="checkbox"/> is attached hereto.</p> <p>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</p> <p>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))</p> <p>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</p> <p>b. <input type="checkbox"/> have been communicated by the International Bureau.</p> <p>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</p> <p>d. <input type="checkbox"/> have not been made and will not be made.</p> <p>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).</p> <p>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</p> <p>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p> <p>Items 11 to 20 below concern document(s) or information included:</p> <p>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</p> <p>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</p> <p>13. <input type="checkbox"/> A FIRST preliminary amendment.</p> <p>14. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.</p> <p>15. <input type="checkbox"/> A substitute specification.</p> <p>16. <input type="checkbox"/> A change of power of attorney and/or address letter.</p> <p>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.</p> <p>18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4).</p> <p>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</p> <p>20. <input checked="" type="checkbox"/> Other items or information: International Publication WO 00/38149 International Preliminary Examination Report 2 Forms PCT/IB/306</p>					

U.S. APPLICATION NO. 09/068695 Unassigned		INTERNATIONAL APPLICATION NO PCT/US99/02737		ATTORNEY'S DOCKET NUMBER 05222.00171	
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21. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)): Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1000.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$860.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$710.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$690.00 International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 ENTER APPROPRIATE BASIC FEE AMOUNT =				CALCULATIONS PTO USE ONLY	
				\$	860
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input checked="" type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	130
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$	
Total claims	18 - 20 =	0	x \$18.00	\$	0
Independent claims	2 - 3 =	0	x \$80.00	\$	0
MULTIPLE DEPENDENT CLAIM(S) (if applicable)					+ \$270.00
TOTAL OF ABOVE CALCULATIONS =				\$	990
<input type="checkbox"/> Applicant claims small entity status. See 37.CFR 1.27. The fees indicated above are reduced by 1/2.				\$	
SUBTOTAL =				\$	990
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$	
TOTAL NATIONAL FEE =				\$	990
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +				\$	
TOTAL FEES ENCLOSED =				\$	990
				Amount to be refunded:	\$
				charged:	\$

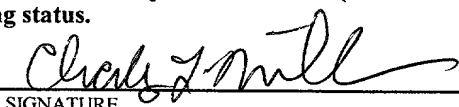
a. ☐ A check in the amount of \$ _____ to cover the above fees is enclosed.

b. ☒ Please charge my Deposit Account No. 01-0850 in the amount of \$ 990 to cover the above fees.
 A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any
 overpayment to Deposit Account No. 01-0850. A duplicate copy of this sheet is enclosed.

d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. **Credit card
 information should not be included on this form.** Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR
 1.137 (a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO: Charles L. Miller BANNER & WITCOFF, LTD. Ten S. Wacker Drive, Suite 3000 Chicago, IL 60606-7407	 SIGNATURE Charles L. Miller NAME 43,805 REGISTRATION NUMBER
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**A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A
GOAL BASED SYSTEM UTILIZING A TABLE BASED ARCHITECTURE**

Field Of The Invention

The present invention relates to education systems and more particularly to a rule based tutorial system that utilizes a table of components to control business simulations of actual environments to teach new skills.

Background of the Invention

When building a knowledge based system or expert system, at least two disciplines are necessary to properly construct the rules that drive the knowledge base, the discipline of the knowledge engineer and the knowledge of the expert. The domain expert has knowledge of the domain or field of use of the expert system. For example, the domain expert of an expert for instructing students in an automotive manufacturing facility might be a process control engineer while the domain expert for a medical instruction system might be a doctor or a nurse. The knowledge engineer is a person that understands the expert system and utilizes the expert's knowledge to create an application for the system. In many instances, the knowledge engineer and domain expert are separate people who have to collaborate to construct the expert system.

Typically, this collaboration takes the form of the knowledge engineer asking questions of the domain expert and incorporating the answers to these questions into the design of the system. This approach is labor intensive, slow and error prone. The coordination of the two separate disciplines may lead to problems. Although the knowledge engineer can transcribe input from the expert utilizing videotape, audio tape, text and other sources, efforts from people of both disciplines have to be expended. Further, if the knowledge engineer does not ask the right questions or asks the questions in an incorrect way, the information utilized to design the knowledge base could be incorrect. Feedback to the knowledge engineer from the expert system is often not available in prior art system until the construction is completed. With conventional system, there is a time consuming feedback loop that ties together various processes from knowledge acquisition to validation.

Educational systems utilizing an expert system component often suffer from a lack of motivational aspects that result in a user becoming bored or ceasing to complete a training program. Current training programs utilize static, hard-coded feedback with some linear video and graphics used to add visual appeal and illustrate concepts. These systems typically support one "correct" answer and navigation through the system is only supported through a single defined path which results in a two-dimensional generic interaction, with no business model support and a single feedback to the learner of correct or incorrect based on the selected response. Current tutorial systems do not architect real business simulations into the rules to provide a creative learning environment to a user.

SUMMARY OF THE INVENTION

According to a broad aspect of a preferred embodiment of the invention, a goal based learning system utilizes a rule based expert training system to provide a cognitive educational experience. The system provides the user with a simulated environment that presents a business opportunity to understand and solve optimally. Mistakes are noted and remedial educational material presented dynamically to build the necessary skills that a user requires for success in the business endeavor. The system utilizes an artificial intelligence engine driving individualized and dynamic feedback with synchronized video and graphics used to simulate real-world environment and interactions. Multiple "correct" answers are integrated into the learning system to allow individualized learning experiences in which navigation through the system is at a pace controlled by the learner. A robust business model provides support for realistic activities and allows a user to experience real world consequences for their actions and decisions and entails realtime decision-making and synthesis of the educational material. The system is architected around a table of components to manage and control the system.